

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed February 25, 2004 (Paper No. 17). Claims 17, 22, 26, and 32 are directly amended and claims 56-62 are newly added. Reconsideration and allowance of the application and presently pending claims 17-62 are respectfully requested.

I. Indication of Allowable Subject Matter

Applicants acknowledge that claims 36-55 have been indicated as allowable.

II. Interview Summary

Applicants first wish to express his sincere appreciation for the time that Examiner spent with Applicants' Attorney during a telephone discussion on March 24, 2004 regarding the outstanding Office Action. The discussion involved clarifying the teachings of cited prior art, *Monro* and *Kuroda*.

III. Response to Claim Rejections Under 35 U.S.C. §103

In the Office Action, claims 17-19, 22-23, 26-28, and 32-33 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,078,619, to *Monro, et al.* and in view of U.S. Patent No. 4,591,909, to *Kuroda, et al.* Claims 20-21, 24-25, 29-31, and 34-35 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Monro* and *Kuroda* as applied to claims 17, 22, 26, and 32, and further in view of U.S. Patent No. 6,415,055, to *Kato*.

A. Claim 17

Claim 17 recites the feature of a first object-oriented coder that assigns a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data. Applicants respectfully submit that the cited references fails to disclose, teach, or suggest the above-recited feature of claim 17.

In rejecting claim 17, the Office Action admits that *Monro* "does not specifically disclose a higher number of error control overhead bits to the object macroblocks than to the background macroblocks" (page 3 of the Office Action). In this regard, the Office Action uses *Kuroda* alleging

that “*Kuroda* [] teaches interframe coding apparatus for providing error control overhead bits to the picture macroblocks and the background macroblocks. Therefore, it clearly would have been considered obvious to a person of ordinary skill in the relevant art employing system/method for communication of video data as taught by *Monro et al* to incorporate the conventionally well know concept of providing error control overhead bits to the picture macroblocks and the background macroblocks as taught by *Kuroda et al* so as to assign a higher number of error control overhead bits to the object macroblocks than to the background macroblocks, since the *Monro*’s object macroblocks have been assigned a higher number of bits, thereby having a greater chance of sustaining more errors than the lower bits assigned background macroblocks” (page 3 of the Office Action).

1. *Monro* fails to disclose, teach, or suggest assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data

As admitted in the Office Action, *Monro* “does not specifically disclose a higher number of error control overhead bits to the object macroblocks than to the background macroblocks” (page 3 of the Office Action). Applicants respectfully submit that *Monro* further does not disclose, teach, or suggest assigning a higher number of error control overhead bits based on a threshold of a bit rate of a partitioned-video data.

- a. Error Protection

Monro apparently discloses that the *Monro* system can use a packet switched network as a transmission medium (col. 3, lines 48-52). Further *Monro* discloses in col. 6, lines 49-54 the following:

“In one version of the system, as shown in FIG. 1, once the compression stage has been completed, the quadtree and compressed data for each tile are ‘packetized’ to provide some level of error protection. This allows for some of the transmitted data to be corrupted, and for the system to remain in a synchronised state.

There are of course many ways in which the individual blocks may be sorted into priority order, and transmitted. Depending upon application, the information could be sent on a tile by tile basis, with the quadtree structure along with the corresponding data being packetized and sent just for an individual tile.”

(Emphasis Added)

Monro further discloses that “the system is arranged to re-send (replace) each of the tiles 30 in a pseudo random sequence, whether or not the system considers such re-sending to be necessary. This is useful, particularly in lossy environments, to compensate for possible errors in the previous sending of one or more tiles” (col. 7, lines 38-42). Accordingly, Applicants respectfully assert that the *Monro* error protection using packets is not the claimed feature of assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data, as recited in claim 17. Therefore, a prima facie case establishing an obviousness rejection over *Monro* has not been made. For at least this reason alone, Applicants respectfully submit that claims 22, 26, and 32 be allowed and the rejection be withdrawn.

b. Error Thresholds

Monro apparently discloses that “[a] rate buffering system limits the bandwidth by transmitting only the foreground blocks which most improve the image and are above some error threshold. The high fidelity background object is identified and communicated to a decoder, which can in the preferred embodiment be used to re-draw background fragments as foreground objects move across them.” (Emphasis Added, col. 2, lines 60-66). *Monro* further discloses that “[there] are error thresholds in both the rate buffering and the object separator modules to limit the effect of camera noise; these may [] be used to mitigate small changes in the scene such as slight motion in vegetation or ripples on water” (column 7, lines 20-24 of *Monro*). Accordingly, Applicants respectfully assert that the *Monro* rate buffering system does not assign a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data, as recited in claim 17. Therefore, a prima facie case establishing an obviousness rejection over *Monro* has not been made. Accordingly, for at least this reason alone, Applicants respectfully submit that claim 17 be allowed and the rejection be withdrawn.

2. *Kuroda* fails to disclose, teach, or suggest assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data

In fact, *Kuroda* apparently discloses that a “predictive coding is performed by using [an] optimal predictive block. According to this method, after a moving element in the picture is displaced, the background area is monitored by using as predictive value data stored in the second memory. A prediction error becomes small, and coding efficiency is improved. In particular, motion compensated interframe coding is performed in addition to detection of the background area, thereby further improving the coding efficiency. The background image stored in the second memory is properly updated in accordance with the input video signal” (Abstract of *Kuroda*).

Further, *Kuroda* apparently discloses that “optimal predictive block is detected such that block signals at identical locations of the present and previous frames which are read out from the first and second memory means are used as prediction signals, and prediction errors of the block signals are detected for every block of the input video signal divided into blocks so as to access whichever one of the first and second memory means has a smaller prediction. ... According to an aspect for detecting a background area in interframe coding of the present invention, it is detected whether or not the prediction error of each sample of the blocks constituting the input video signal is less than a predetermined threshold value. When the prediction error is less than the predetermined threshold value, the corresponding sample is detected as a background area” (col. 2, lines 19-66).

Accordingly, Applicants respectfully submit that the *Kuroda* predictive coding does not assign a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data, as recited in claim 17. Therefore, a prima facie case establishing an obviousness rejection over *Monro* has not been made. For at least this reason alone, Applicants respectfully submit that claim 17 be allowed and the rejection be withdrawn.

3. *Monro* in view of *Kuroda* fails to disclose, teach, or suggest assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data

As explained above, because *Monro* and *Kuroda*, individually, fail to disclose, teach, or suggest at least the feature of assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data as recited in claim 17, *Monro* and *Kuroda*, in combination, also fails to disclose, teach, or suggest at least the above feature. Accordingly *Monro* in view of *Kuroda* fails to render claim 17 obvious. A prima facie case establishing an obviousness rejection over *Monro* in view of *Kuroda* has not been made. Applicants respectfully request that claim 17 be allowed and the rejection be withdrawn.

B. Claims 22, 26, and 32

Claims 22 and 32 recite the feature of “assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data.” Claim 26 recites the feature of “means for allocating a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data.”

As explained above with reference to claim 17, Applicants respectfully submit that the *Monro* error protection using packets and *Monro* rate buffering system are not the claimed feature of “assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data”, as recited in claims 22 and 32, and, and “means for allocating a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data”, as recited in claim 26. Therefore, a prima facie case establishing an obviousness rejection over *Monro* has not been made. Accordingly, for at least this reason alone, Applicants respectfully submit that claims 22, 26, and 32 be allowed and the rejection be withdrawn.

In addition, Applicants respectfully submit that the *Kuroda* predictive coding does not “[assign] a higher number of error control overhead bits to the object macroblocks than to the

background macroblocks based on a threshold of the bit rate of the partitioned-video data”, as recited in claims 22 and 32, nor has “means for allocating a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of the bit rate of the partitioned-video data”, as recited in claim 26. Therefore, a prima facie case establishing an obviousness rejection over *Monro* has not been made. Accordingly, for at least this reason alone, Applicants respectfully submit that claims 22, 26, and 32 be allowed and the rejection be withdrawn.

As explained above, because *Monro* and *Kuroda*, individually, fail to disclose, teach, or suggest at least the feature of assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks based on a threshold of a bit rate of a partitioned-video data as recited in claims 22, 26, and 32, *Monro* and *Kuroda*, in combination, also fails to disclose, teach, or suggest at least the above feature. Accordingly *Monro* in view of *Kuroda* fails to render claims 22, 26, and 32 obvious. A prima facie case establishing an obviousness rejection over *Monro* in view of *Kuroda* has not been made. Applicants respectfully request that claims 22, 26, and 32 be allowed and the rejection be withdrawn.

C. Claims 18-21, 23-25, 27-31, and 33-35

Because independent claims 17, 22, 26, and 32 are allowable over the cited art of record, dependent claims 18-21, 23-25, 27-31, and 33-35 are allowable as a matter of law for at least the reason that dependent claims 18-21, 23-25, 27-31, and 33-35 contain all the features and elements of their respective independent base claim. *See, e.g., In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Applicants respectfully request that the rejection to dependent claims 18-21, 23-25, 27-31, and 33-35 be withdrawn for this reason alone.

IV. Newly Added Claims 56-62

Newly added claims 56-59 recite the features of evaluating whether the bit rate of the partitioned-video data is less than a bit rate of nonpartitioned-video data and assigning a higher number of error control overhead bits to the object macroblocks than to the background macroblocks when the bit rate of the partitioned-video data is less than then the bit rate of the nonpartitioned-video data. Applicants respectfully submit that the cited art of record fails to disclose, teach, or suggest the each and every feature of claims 56-59. Accordingly, Applicants

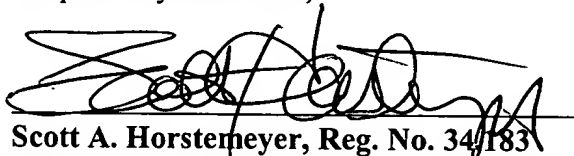
respectfully request that the rejection to dependent claims 56-59 be withdrawn for this reason alone.

In addition, because independent claims 17, 22, 26, and 32 are allowable over the cited art of record, dependent claims 56-59 and 60-62 are allowable as a matter of law for at least the reason that dependent claims 56-59 and 60-62 contain all the features and elements of their respective independent base claim. *See, e.g., In re Fine*, supra. Accordingly, Applicants respectfully request that the rejection to dependent claims 56-59 and 60-62 be withdrawn for this reason alone.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 17-62 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at (770) 933-9500.

Respectfully submitted,



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